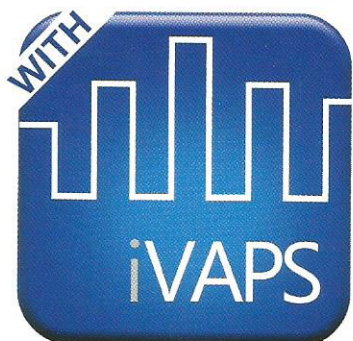


LumisTM 150

VPAP ST



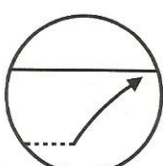
Targets and Maintains Alveolar Ventilation



Automatic and Intelligent for Home and Hospital Use



iVAPS



iBR



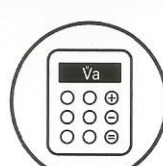
AutoEPAP



Ramp



Ramp Down



Target Va



Learn Targets



Lumis 150 VPAP ST is a non-invasive ventilator designed for non-dependent patients with respiratory insufficiency.

Featuring ResMed's unique volume assurance mode – iVAPS (intelligent Volume – Assured Pressure Support) – Lumis 150 VPAP ST maintains target alveolar ventilation to suit each patient's changing needs. It is designed to maintain preset target alveolar ventilation by monitoring delivered ventilation, adjusting the pressure support and providing backup breath spontaneously.

It also features intelligent backup rate – iBR – that provides backup breaths when needed, and optional AutoEPAP, which maintains upper airway patency. Together, iVAPS, iBR and AutoEPAP intelligently and automatically adjust to deliver ventilation that meets individual patient needs.



iVAPS: Intelligent Volume-Assured Pressure Support

iVAPS is ResMed's unique volume assurance mode designed for adults with chronic respiratory failure, which automatically adjusts to address changing patient conditions during therapy.

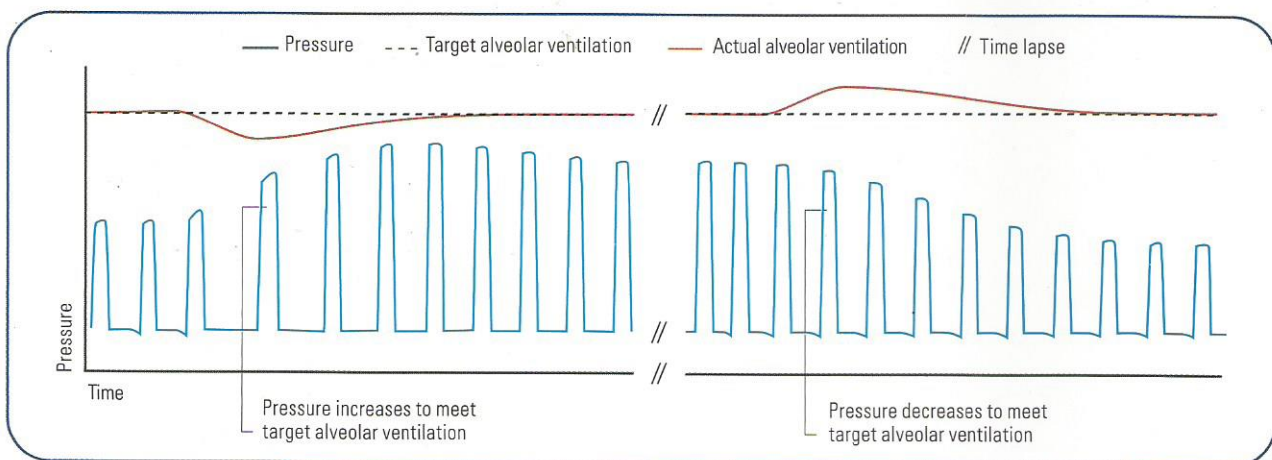
What does iVAPS do?

Targets alveolar ventilation: iVAPS intelligently targets alveolar ventilation and enables improved control of ventilation. It does so by taking into account tidal volumes, respiratory rates and the anatomical dead space in your patient's airways and ventilate the patient more effectively.

Learns and adapts: using a range of clinical parameters like patient's height, respiratory rate (input for iBR), minute ventilation, and tidal volume that can be entered or learned during set up (through Learn Targets); iVAPS set optimal personalized targets for each patient, that is "target patient rate" and "target alveolar ventilation". It then adapts to patient's changing requirements by constantly monitoring the patient's actual respiratory rate in relation to the target rate.

Responds to change: iVAPS then continuously monitors the patients' actual alveolar ventilation and compares it to their target alveolar ventilation, automatically adjusting the level of pressure support to achieve and maintain their target alveolar ventilation. It reacts rapidly but gently and stabilise blood gases even when their respiratory rate changes during night.

Improves adherence: compared to standard pressure support ventilation, iVAPS helps patients adhere to therapy for 60 minutes longer per session.¹



¹ Kelly JL et al. Randomized trial of 'intelligent' autotitrating ventilation versus standard pressure support non-invasive ventilation: impact on adherence and physiological outcomes. *Respirology* 2014;19:596-603. Available in the Lumis™ 150 VPAP ST / ST-A, Stellar™ 150 and Astral™ series of devices. Learn Targets technology is available in Stellar and Lumis series of devices only.





iBR: Intelligent Backup Rate

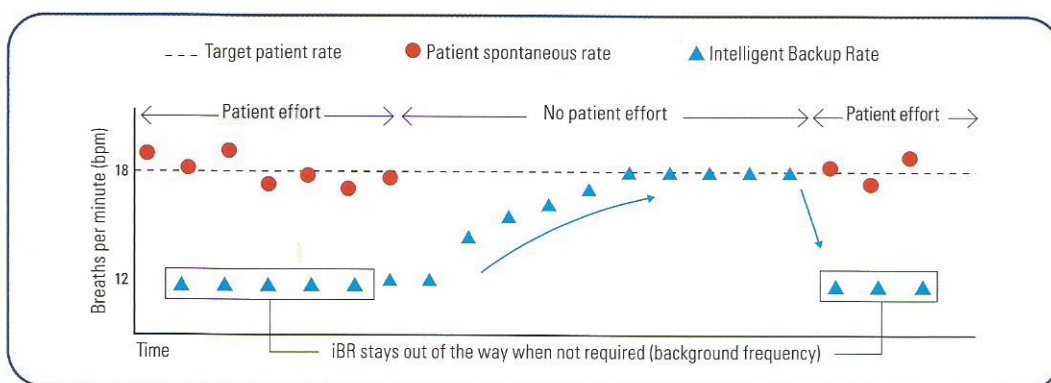
iBR is designed to enhance the conventional approach to backup breaths. It maximises your patient's opportunities for spontaneous breathing by delivering support only when it's needed and tailoring that support to meet their real needs.

What does iBR do?

Provides back up breaths intelligently: provides back up breaths within 2 boundaries: target patient rate and background frequency which is two-thirds of the target rate. iBR will provide backup breaths only if there's an apnoea or lack of effort, but won't provide unnecessary support for pauses caused by cough or sigh.

Reacts swiftly and enhances comfort: designed to safely and quickly return your patient to target rate as iBR provides minimal pressure support and best synchronization at the time of backup breaths. This improves patient's comfort and compliance.

Time saving personalisation: automatically determines the most suitable iBR for your patient based on their spontaneous stable awake rate, giving you peace of mind and ensuring your patient receives personalized ventilation.



AutoEPAP: Auto Expiratory Positive Airway Pressure

Adding another layer of intelligence to iVAPS is the optional AutoEPAP feature, which maintains upper airway patency.

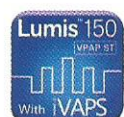
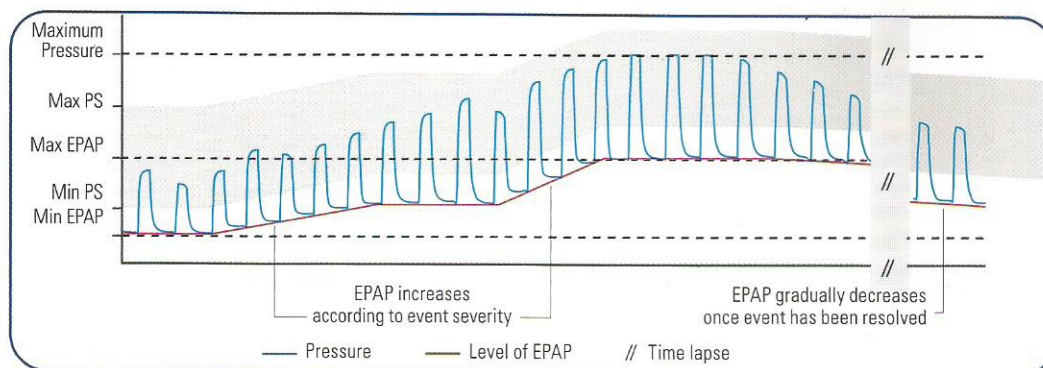
AutoEPAP automatically adjusts expiratory positive airway pressure (EPAP) to maintain an open upper airway. It aims to prevent full and partial obstructions from occurring and automatically adjusts expiratory pressure settings to address any obstructions that do occur.

What does AutoEPAP do?

Identify obstructions: AutoEPAP identifies full and partial obstructions by calculating the severity of the event.

Maintains upper airway patency: AutoEPAP maintains upper airway patency by providing the minimum level of EPAP required to meet your patient's changing needs. It also maintains upper airway patency even if target expiratory pressure fluctuates due to variations in your patient's primary condition, body position, weight or medication.

Automatic response: it automatically adjusts expiratory pressure within Min EPAP and Max EPAP settings to address full and partial obstructions, then re-establishes the right balance between upper airway patency and breathing comfort. It gradually decreases the pressure once the obstructive event has been addressed.



ResMed NIV technologies

A key requirement for success in NIV is to improve patient comfort, compliance and treatment efficacy through excellent patient ventilator synchrony. Lumis 150 VPAP ST features 3 unique ResMed technologies that work together to achieve this synchrony.



Vsync

Provide excellent patient-ventilator synchrony, even in the presence of significant leak.



TiControl

Set min and max limits on either side of the patient's ideal inspiratory time.



5 Trigger

Optimise settings according to the patient's condition, using five trigger and cycle sensitivity levels.



Easy-to-read, front-facing colour screen

Dedicated home button will always take you back to the top of the menu

Push-dial navigation with a single scroll menu

Intuitive and simple to navigate

The user interface on Lumis ventilators has been designed with you and your patients in mind: it's intuitive and simple to navigate. It's easy to view and personalise patient comfort settings, as well as gain valuable insight into their progress with a **sleep report** at the end of every session.

Automatic humidification

When used with a HumidAir™ heated humidifier and ClimateLineAir™ heated tube, Lumis delivers automatic humidification Climate Control Auto. This mode comes pre-set with the temperature and humidity levels designed for optimal comfort, so you can set your patients up to receive all the benefits of humidification instantly – no settings to change and no complicated menus to navigate.



Built-in simplicity

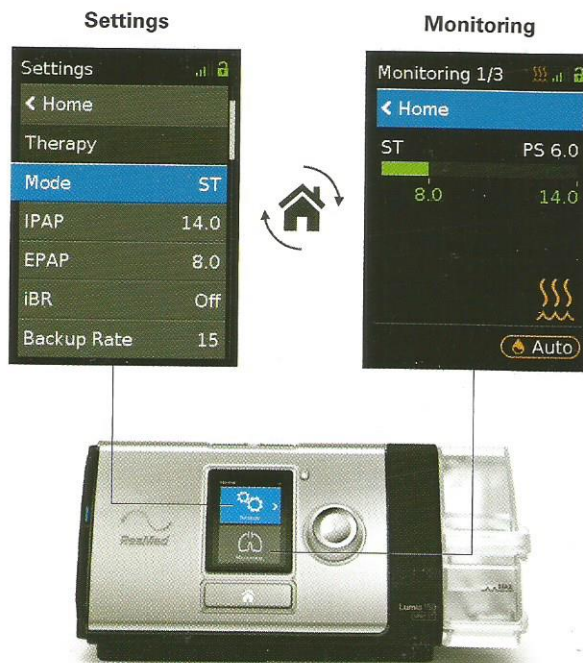
Lumis's **QuickNav** feature gives you a low-touch solution to therapy adjustment.

By simply double-clicking the home button on the device, you can quickly and easily toggle between the **Settings** screen (where you can make adjustments to your patient's therapy) and the **Monitoring** screen (where you can check the impact of those adjustments on the patient's therapy). It's that easy and efficient.

Lumis displays your patient's **SpO₂** and **pulse rate*** on screen even before therapy has begun, so you can personalise the ventilator settings to suit their needs.

Lumis also offers Essentials mode for patients who want to receive their therapy without worrying about settings or menus. They can simply press Start and the ventilator takes care of the rest.

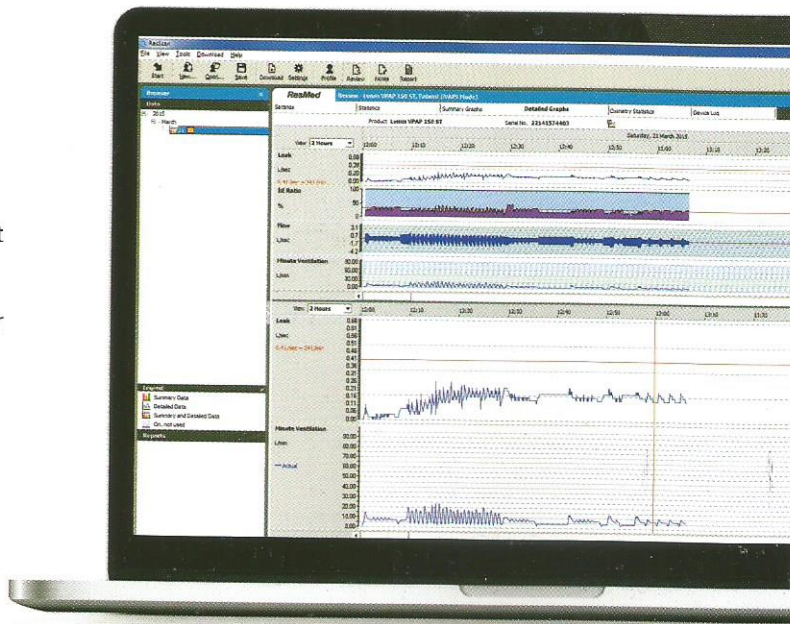
*When a compatible oximeter and oximeter module are attached.



Advanced clinical insights

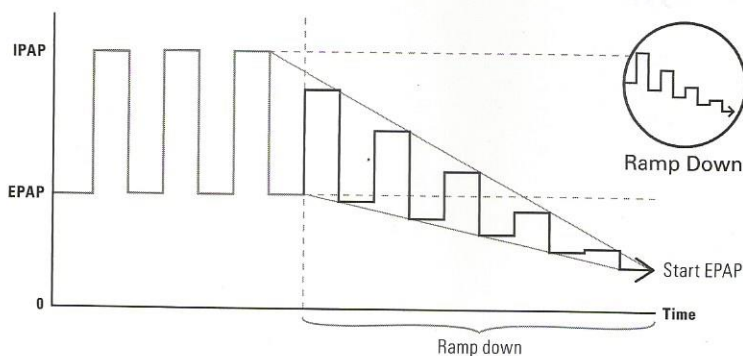
Lumis 150 is supported by ResScan, ResMed's PC-based clinical analysis and patient data management software which enables you to update and review device therapy settings, and download, analyse and store therapy data breath by breath across a number of metrics (including AHI, leak, and pressure information). This provides insights to improve therapy, enhance efficacy and facilitate long term compliance.

ResScan 5.7 supports enabling essentials mode which allows patient to just press start without worrying about settings or menus.

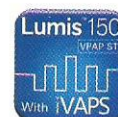


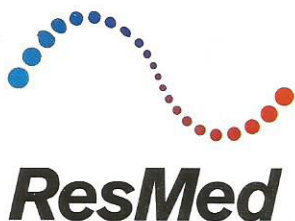
Customisation for comfort

For patients who need greater levels of pressure support (e.g. COPD patients), turning the ventilator off at the end of therapy can be quite abrupt. Lumis's optional **Ramp Down** feature gradually reduces the pressure support delivered to help ease patients into spontaneous breathing.



Lumis ramps down the pressure delivered over a 15-minute period





Technical Specifications	Lumis™ 150 VPAP ST 
Modes	CPAP, S, T, ST with optional iBR, PAC, iVAPS with iBR and optional AutoEPAP
Operating pressure range	2–25 cm H ₂ O (2–25 hPa) in S, T, ST, PAC and iVAPS modes 4–20 cm H ₂ O (4–20 hPa) in CPAP mode
Sound pressure level	26.6 dBA with uncertainty of 2 dBA as measured according to ISO 17510-1:2009 (CPAP mode)
Dimensions (H x W x D)	116 mm x 205 mm x 150 mm (Device only) 116 mm x 255 mm x 150 mm (Device with HumidAir humidifier)
Weight	1106 g (Device only) 1268 g (Device with HumidAir humidifier)
90W power supply unit	Input range: 100–240V, 50–60Hz, 57VA (typical power consumption) 108VA (peak power consumption)
Operating temperature/humidity/altitude	+5°C to +35°C/ 10–95% relative humidity, non-condensing/ Sea level to 2,591 m; air pressure range 1013 hPa to 738 hPa
Storage and transport temperature/humidity	-20°C to +60°C/ 5–95% relative humidity, non-condensing
Housing construction	Flame retardant engineering thermoplastic
Supplemental oxygen	Recommended maximum flow: 15 L/min (CPAP, S, T, ST, PAC); 4 L/min (iVAPS)
Standard air filter	Polyester non-woven fibre
Tubing	SlimLine™ and ClimateLineAir (15 mm); Standard (19 mm)
Air outlet	22 mm air outlet complies with ISO 5356-1:2004
Electromagnetic compatibility	Requirements (EMC) according to IEC60601-1-2:2007 for residential, commercial, and light industry environments
Aircraft use	ResMed confirms that device meets the Federal Aviation Administration (FAA) requirements (RTCA/DO-160, section 21, category M) for all phases of air travel
IEC 60601-1: 2006 classification	Class II (double insulation), Type BF Ingress protection IP22

Also Available Lumis™ 150 VPAP ST-A with Alarms. Alarms available for high leak, low minute ventilation, apnoea, non-vented mask and low SpO₂ (when an oximeter is connected)



Product codes

	Lumis™ 150 VPAP ST	Lumis™ 150 VPAP ST-A
Device	28123	28220
Device with HumidAir heated humidifier and ClimateLine Air heated tube	28118	28207

Further personalise each patient's therapy with compatible ResMed Air Solutions accessories.



ClimateLineAir and ClimateLineAir Oxy heated tubing



HumidAir heated humidifier cleanable tub



Oximetry module/kit



USB module



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